2026 Short Takes

RF Animal Cancer Review Is #1

Systematic Review Pointing to Cancer Risk Downloaded Some 28,000 Times in 2025

May 7, 2026

A systematic review pointing to evidence that exposure to RF radiation causes cancer in animals has captured the world's attention.

The review, prepared by an eight-member team from six countries, led by Meike Mevissen of Switzerland's University of Bern, was commissioned by the World Health Organization in Geneva. It was published by *Environment International* last April. (Here's some background.)

A few days ago, the editors of *Environment International* announced that Mevissen's review was the journal's most-downloaded paper of 2025. Readers accessed a total of some 28,000 pdfs and full article views, according to Frederic Coulon, one of the journal's three co-editors-in-chief.

Claude, Anthropic's AI assistant, calls 28,000 downloads "quite impressive," adding that it puts the Mevissen paper in the top 1-5% of all downloaded academic papers.

The runner-up, with about 21,500 downloads, explores the impact of pharmaceutical and personal care products on metabolic diseases. In third place is a paper on the health effects of air pollution in China. It had far fewer views —just 11,000 downloads.

The Mevissen paper has already been cited in other published work at least 35 times, according to Google Scholar.

Denounced by BfS and ICNIRP

The Mevissen paper is one of 12 RF systematic reviews prepared for the WHO. The others were far more circumspect about a

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Italy's 6 V/m RF Limit at Risk
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Korean NTP Lite: Progress Report

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possible cancer risk. Not surprisingly, the Mevissen review has attracted the most attention —not all of it positive.

The German radiation protection office, known as the BfS, has been the most critical. Soon after the paper was posted online, the agency issued a statement rejecting the cancer finding. Later, four members of its staff published a 14-page commentary in *Environment International*, concluding that their analysis of the same studies "strongly disagrees" with Mevissen's (her team responded).

Another group, led by Australia's Ken Karipidis, the vice chair of ICNIRP, presented its own condemnation, calling Mevissen's analysis "flawed" (here too, Mevissen responded.)

Both the BfS and ICNIRP have long maintained that RF does not —indeed, *cannot*— lead to cancer in animals or humans. The BfS is the primary sponsor of ICNIRP.

Others have endorsed Mevissen findings. Earlier this year, Igor Belyaev and Suleyman Dasdag, two members of the ICBE-EMF, supported Mevissen's review in a letter to the editor of the journal. (ICBE-EMF was set up a few years ago to counter ICNIRP.)

The Mevissen paper generated a stir earlier this year —too late to have any bearing on the 2025 download numbers— when she told a Swiss journalist that the WHO had tried to manipulate the work of her team, in an apparent effort to tone down the stated cancer risk. See: "They Kept Telling Us What To Do."

Last fall, the ICBE-EMF offered a scathing critique of the WHO's RF systematic review program in the journal *Environmental Health*. See: "WHO Gets an 'F' on RF."

NTP Lite: All Good in Korea Too

Letters to the Editor Are in the Works

January 18, 2026
Updated July 31, 2026

Korean researchers working on NTP Lite have joined their Japanese collaborators in reporting no evidence of adverse effects among rats chronically exposed to cell phone radiation.

"Long-term exposure to CDMA-modulated 900 MHz RF was neither carcinogenic or genotoxic at an SAR of 4 W/Kg in male rats," Young Hwan Ahn and coworkers write in *Toxicological Sciences*, the same journal that published the Japanese results a few days ago. The Korean paper was posted on January 16.

NTP Lite is a scaled down version of the U.S. NTP RF–cancer animal study. For background, go here.

The Japanese and Korean papers have prompted a raft of criticism. A number of letters to the editor of the journal are being prepared, *Microwave News* has been told.

“It’s very obvious that the objective of the paper is to neutralize the results of the NTP study,” Henry Lai, professor emeritus at the University of Washington, Seattle, said of the Japanese study. “The authors have lost their objectivity as scientists —and, sadly, they don’t seem to know much about RF science.”

The NTP Lite project, which got underway in 2019, is running far behind schedule. RF exposures were completed in 2022, followed by years of analysis.

One reason for the delay of the Korean experiment was the premature death of at least four of the RF-exposed rats. This led to the genotoxic component of the study being carried out separately. (See our report from June 2023.) The death of those rats remains unexplained.

The project was designed for the data from the two countries to be combined —to enhance statistical reliability. But, neither of the published papers addresses where that stands.

The full text of the Korean paper (abstract below) is open access, as is the Japanese paper.

Abstract

A chronic bioassay investigating radiofrequency (RF) carcinogenicity, intentionally designed to be conducted simultaneously in Korea and Japan, using the same research protocol and experimental environment. The study aimed to assess the potential carcinogenicity of Code Division Multiple Access (CDMA)-modulated 900 MHz RF signals at a whole-body specific absorption rate (SAR) of 4 W/kg, which is the reference level of the international human safety guideline, and to verify the key findings from the National Toxicology Program (NTP) study at that SAR level.

Two reverberation chamber systems were used for RF exposures, and the same study protocols were followed. Male Harlan Sprague-Dawley (Hsd: Sprague Dawley® SD®) rats were randomly assigned to cage-control, sham-exposed, or RF-exposed groups. The exposure started on gestational day 5 and lasted for 18 hours and 20 minutes each day, with 10-minute on/off cycles. The project included a 28-day toxicity study, a 2-year carcinogenicity study, and a 14-week genotoxicity test. Histopathological evaluations were conducted in a partially blinded manner. The results were independently analyzed and submitted separately based on each country’s research findings.

In the Korean study, no statistically significant changes in tumor incidence or survival rates were observed. No significant RF-related effects were detected in the heart, brain, or adrenal glands. No changes in body temperature. Genotoxicity tests showed no evidence of DNA damage or mutation.

In conclusion, the Korean part found that long-term exposure to CDMA-modulated 900 MHz RF was neither carcinogenic nor genotoxic at a SAR of 4 W/kg in male rats.

Commentary from ICBE-EMF

July 31, 2026

Three members of the ICBE-EMF have published a critique of the NTP Lite study design, concluding that it “systematically biased the project toward null results and eliminated the possibility of detecting a positive trend.”

Details here.

NTP Lite: No Cancer Risk Seen in Japan

Korean Findings Are Still Pending

January 13, 2026
Updated July 31, 2026

The Japanese team working on a partial repeat of the NTP RF–animal cancer study has reported seeing no “reproducible” effects on cancer or genotoxicity in RF-exposed male rats.

The project —nicknamed NTP Lite— is a scaled-down version of the $30+ million project carried out by the U.S. National Toxicology Program which found “clear evidence” that RF radiation can cause cancer in rats. The NTP final report was released in 2018.

The Japanese results were published in the journal *Toxicological Sciences* yesterday, January 12. The paper is open access.

“This study performed in Japan, jointly planned and executed by Japan and Korea, provides strong evidence that long-term exposure to 900 MHz RF-EMFs did not produce reproducible carcinogenic or genotoxic effects in male rats,” states Katsumi Imaida of Japan’s Kagawa University, the leader of the Japanese study group.

“No statistically significant increases in the incidences of neoplastic or non-neoplastic lesions were found in any major organ, including the brain, heart, and adrenal glands. Genotoxicity assays revealed no evidence of DNA damage or chromosomal aberrations in RF-exposed rats,” according to the Japanese abstract.

The results of the parallel Korean experiment have not yet been released. The original plan was to combine the Japanese and Korean data to achieve greater statistical reliability. The leader of the Korean arm of the project is Young Hwan Ahn of Ajou University School of Medicine.

NTP Lite is years behind schedule. Work on the project began in 2018 and the RF exposures were scheduled to be completed over three years ago. Since then some partial reports have dribbled out (more here, here and here), leading some observers to suggest that the project would be unable to resolve the RF–cancer question.

For example, *Microwave News* was told last year that a group of animals were to be exposed to RF at 6 W/Kg in the Japanese experiment, but that part of the protocol was quietly abandoned. The new paper does not mention the 6 W/Kg animals, which were designed to serve as positive controls.

Joel Moskowitz of the UC Berkeley School of Public Health, who runs the Electromagnetic Radiation Safety website, offered the

following comment based on a preliminary reading of the new Japanese study: “A null result in the Japanese NTP Lite study should not be considered a refutation, because it is underpowered to see relatively low-incidence tumors.”

Here is the abstract of the published paper:

Abstract

The potential carcinogenic and genotoxic effects of radiofrequency electromagnetic fields, particularly those emitted by mobile communication systems, have raised public health concerns. A previous study by the U.S. National Toxicology Program suggested increased incidences of gliomas and cardiac schwannomas in rats exposed to high levels of RF radiation. To evaluate these findings, an international collaborative study was initiated between Japan and Korea.

Male Hsd: Sprague Dawley® SD® rats were exposed to 900 MHz CDMA-modulated RF-EMFs at a whole-body specific absorption rate of 4 W/kg for 18 hours and 20 minutes daily over two years. The study included a 28-day preliminary toxicity study, genotoxicity assays (alkaline comet and micronucleus tests), and a two-year carcinogenicity assessment. All procedures followed OECD guidelines and Good Laboratory Practice.

No statistically significant increases in the incidences of neoplastic or non-neoplastic lesions were found in any major organ, including the brain, heart, and adrenal glands. Genotoxicity assays revealed no evidence of DNA damage or chromosomal aberrations in RF-exposed rats. A higher survival rate in the RF-exposed group, likely due to lower body weight and food consumption, was observed.

This study performed in Japan, jointly planned and executed by Japan and Korea, provides strong evidence that long-term exposure to 900 MHz RF-EMFs did not produce reproducible carcinogenic or genotoxic effects in male rats. Combined with data from the Korean counterpart study, these results are expected to contribute to future international assessments of the carcinogenic potential of electromagnetic radiation.

This is a developing story and will be updated as further details emerge.

Korean Paper Published

January 18, 2026

The Korean team of NTP Lite has published its own paper, with results similar to those seen in Japan —no adverse effects. For he latest on both papers, go here.

Commentary from ICBE-EMF

July 31, 2026

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